Serial No. 10/083,849 Amdt. dated July 22, 2005 Reply to the Office Action of January 24, 2005

IN THE CLAIMS:

All claim amendments are made without prejudice or disclaimer. Please amend the claims as follows:

- 1. (Withdrawn) An isolated or recombinant phosphorylated Apoptin or functional equivalent and/or functional fragment thereof.
- 2. (Withdrawn) The isolated or recombinant phosphorylated Apoptin of claim 1 or functional equivalent and/or functional fragment thereof wherein said Apoptin is tumor-specifically phosphorylated.
- 3. (Withdrawn) The isolated or recombinant phosphorylated Apoptin of claim 2 or functional equivalent and/or functional fragment thereof wherein said isolated or recombinant phosphorylated Apoptin is phosphorylated on a threonine residue of Apoptin, which threonine residue, in the Apoptin of FIG. 1(SEQ ID NO:1), is located between amino acid 100 and amino acid 121 of SEQ ID NO:1.
- 4. (Withdrawn) The isolated or recombinant phosphorylated Apoptin of claim 3 or functional equivalent and/or functional fragment thereof, wherein said isolated or recombinant phosphorylated Apoptin is phosphorylated on a threonine residue, which threonine residue, in the Apoptin of FIG. 1(SEQ ID NO:1), resides at amino acid position 106 and/or 107 and/or 108 of SEQ ID NO:1.
- 5. (Currently amended) A vector comprising a nucleic acid encoding Apoptin or functional equivalent and/or functional fragment thereof, which Apoptin can be phosphorylated, said vector further comprising:

a nucleic acid molecule encoding a kinase capable of phosphorylating said

Apoptin or functional equivalent and/or functional fragment thereof.

- 6. (Original) A gene delivery vehicle comprising the vector of claim 5.
- 7. (Previously presented) A host cell comprising the vector of claim 5.
- 8. (Withdrawn) An isolated or synthetic antibody or functional equivalent and/or functional fragment thereof specifically recognizing the phosphorylated Apoptin of claim 1.
 - 9. (Withdrawn) An immunoassay comprising the antibody of claim 8.
 - 10. (Withdrawn) A nucleic acid encoding the antibody of claim 8.
 - 11. (Withdrawn) A vector comprising the nucleic acid of claim 10.
 - 12. (Withdrawn) A host cell comprising the nucleic acid of claim 11.
 - 13. (Canceled)
- 14. (Withdrawn) A method for detecting the presence of cancer cells or cells that are cancer prone in a sample of cells, said method comprising:

providing a cell lysate of cells from said sample of cells with Apoptin or a functional equivalent and/or functional fragment thereof which Apoptin or a functional equivalent and/or functional fragment thereof can be phosphorylated, and

determining phosphorylation state of said Apoptin or a functional equivalent and/or functional fragment thereof.

15. (Withdrawn) A method for identifying a putative cancer-inducing agent, said method comprising:

submitting a sample of cells to said putative cancer-inducing agent, and

detecting the presence of cancer cells or cells that are cancer prone in a sample of cells by providing a cell lysate of cells from said sample of cells with Apoptin or a functional equivalent and/or functional fragment thereof which Apoptin or a functional equivalent and/or functional fragment thereof can be phosphorylated, and determining the phosphorylation state of said Apoptin or a functional equivalent and/or functional fragment thereof.

16. (Withdrawn) A method for testing an *in vitro* treatment effect of Apoptin on tumor cells, said method comprising:

providing a cell lysate of tumor cells with Apoptin or functional equivalent and/or functional fragment thereof which can be phosphorylated; and

determining phosphorylation state of said Apoptin.

- 17. (Withdrawn) The method according to claim 14 wherein said Apoptin further comprises a fusion protein.
 - 18. (Withdrawn) A kit for
 - a) detecting the presence of cancer cells or cells that are cancer prone, or
 - b) testing the *in vitro* treatment effect of Apoptin on tumor cells, said kit comprising the antibody of claim 8.
 - 19. (Canceled)
 - 20. (Withdrawn) A pharmaceutical composition comprising: the phosphorylated Apoptin of claim 2.
 - 21. (Withdrawn) The pharmaceutical of claim 20 for the induction of apoptosis.

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- 22. (Withdrawn) The pharmaceutical of claim 21 wherein said apoptosis is p53-independent.
- 23. (Withdrawn) The pharmaceutical composition of claim 22 for the treatment of a disease wherein enhanced cell proliferation or decreased cell death is observed.
- 24. (Withdrawn) The pharmaceutical composition of claim 23 wherein said disease comprises cancer or auto-immune disease.
- 25. (Withdrawn) A method for treating a subject having a disease wherein enhanced cell proliferation or decreased cell death is observed, said method comprising:

treating said subject with the pharmaceutical composition of claim 20.

26. (New) A vector comprising a nucleic acid encoding Apoptin of SEQ ID NO:1, a functional equivalent or a functional fragment thereof, wherein the functional equivalent comprises replacement of at least one threonine residue located at amino acid position 106, 107, or 108 of SEQ ID NO:1 with a glutamic acid to mimic constitutive phosphorylation.